# Cardiovascular Disease

# PREVIOUSLY HAD A HEART ATTACK

Definition: Respondents who answered "yes" to the question "Has a doctor, nurse, or other health professional ever told you that you had a heart attack or myocardial infarction?"

### Prevalence of previously had a heart attack

- South Dakota 5.0%
- o Nationwide median 4.1%

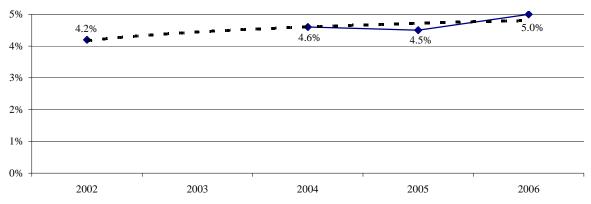
# **Healthy People 2010 Objective**

There was no stated Healthy People 2010 Objective for previously had a heart attack.

# **Trend Analysis**

This question was asked in 2002 and 2004 through 2006. Since 2002, the percent of respondents who previously had a heart attack has been increasing. In 2006, the percent increased from 4.5 percent in 2005 to an all time high of 5 percent in 2006.

Figure 59
Percent of Respondents Who Previously Had a Heart Attack,
2002 and 2004-2006



Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2002, and 2004 2006

#### **Demographics**

**Gender** A significantly higher prevalence of males have ever been told they had a heart

attack than females. This gender difference is evident in specific demographic categories such as those 45 and older, whites, those in the southeast, northeast,

and west regions, and those with higher education levels.

Age The prevalence of ever having a heart attack generally increases as age increases

with significant increases occurring at the 45-54, 65-74, and 75 and older age

groups.

**Race** There are no racial differences demonstrated by the available data.

**Region** The are no regional differences observed from the available data.

**Household** The prevalence of ever having a heart attack is significantly lower for those in the higher income groups.

**Education** Heart attack prevalence generally decreases as education increases. This association is more evident in females than males.

**Employment** Those who are retired or unable to work demonstrate a very high prevalence of ever having a heart attack, while those who are employed for wages, unemployed, or a homemaker show a very low prevalence.

Marital Those who are widowed exhibit a very high prevalence of ever having a heart status attack, while those who have never been married show a very low prevalence.

Table 74 Respondents Who Previously Had a Heart Attack, 2006									
K	esponaei I	Total		siy Had a	a Hear		2006	Fema	lo.
	# Resp.	10tai	95% CI	# Resp.	Wiale	95% CI	# Resp.	rema %	95% CI
Total	6,624	5.0	(4.5-5.6)	2,588	6.9	(5.9-7.9)	4,036	3.2	(2.8-3.8)
Age	-,		(112-213)	_,= = = = =		(0.15 ) (15)	1,000		(=10 010)
18-24	263	0.0	_	111	0.0	_	152	0.0	_
25-34	738	1.1	(0.4-2.7)	285	1.5	(0.5-4.7)	453	0.6	(0.1-2.4)
35-44	1,038	0.7	(0.3-1.4)	420	1.1	(0.5-2.6)	618	0.2	(0.0-1.0)
45-54	1,406	4.3	(3.2-5.7)	586	6.7	(4.8-9.5)	820	1.9	(1.1-3.2)
55-64	1,166	6.6	(5.0-8.5)	498	9.4	(6.8-12.8)	668	3.6	(2.3-5.5)
65-74	942	12.2	(9.9-14.9)	363	19.3	(15.1-24.5)	579	6.1	(4.5-8.2)
75+	1,002	19.7	(16.9-22.8)	302	27.9	(22.5-34.0)	700	14.5	(11.7-17.8)
Race	,		,			,			,
White	5,905	5.1	(4.5-5.7)	2,314	7.0	(6.0-8.1)	3,591	3.3	(2.8-3.9)
American Indian	511	5.2	(3.4-7.6)	188	6.7	(3.9-11.3)	323	3.6	(2.1-6.1)
Region									
Southeast	1,486	4.3	(3.4-5.4)	577	5.9	(4.4-8.0)	909	2.7	(1.9-3.9)
Northeast	1,605	5.6	(4.6-6.8)	606	8.0	(6.1-10.3)	999	3.5	(2.6-4.7)
Central	1,354	5.3	(4.2-6.6)	531	6.4	(4.7-8.7)	823	4.2	(3.1-5.7)
West	1,515	5.3	(4.3-6.6)	603	7.5	(5.7-9.8)	912	3.2	(2.3-4.4)
American Indian Counties	664	5.8	(4.2-7.9)	271	7.2	(4.7-10.9)	393	4.1	(2.6-6.5)
Household Income									
Less than \$10,000	309	8.5	(5.8-12.3)	*	*	*	*	*	*
\$10,000-\$14,999	390	9.7	(6.9-13.3)	111	12.6	(7.4-20.6)	279	8.2	(5.3-12.3)
\$15,000-\$19,999	504	7.3	(5.2-10.2)	161	8.8	(5.2-14.4)	343	6.1	(4.0-9.2)
\$20,000-\$24,999	561	5.1	(3.4-7.7)	206	7.1	(4.1-12.0)	355	3.5	(1.9-6.2)
\$25,000-\$34,999	895	6.2	(4.7-8.1)	384	9.3	(6.7-12.8)	511	2.8	(1.7-4.7)
\$35,000-\$49,999	1,129	4.1	(3.0-5.7)	489	6.3	(4.3-9.1)	640	1.8	(1.0-3.0)
\$50,000-\$74,999	1,029	4.2	(3.1-5.7)	481	6.0	(4.2-8.5)	548	2.0	(1.0-3.8)
\$75,000+	920	2.5	(1.6-3.9)	461	3.7	(2.3-6.0)	459	0.9	(0.3-2.6)
<b>Education</b>									
8th Grade or Less	284	13.8	(9.6-19.4)	124	18.1	(10.9-28.5)	160	8.4	(5.0-13.8)
Some High School	340	6.0	(4.0-8.9)	134	6.4	(3.5-11.3)	206	5.6	(3.3-9.4)
High School or G.E.D.	2,126	6.2	(5.2-7.4)	861	7.8	(6.2-9.8)	1,265	4.5	(3.5-5.7)
Some Post-High School	1,835	4.1	(3.3-5.1)	655	5.9	(4.4-7.8)	1,180	2.6	(1.9-3.7)
College Graduate	2,024	3.6	(2.8-4.7)	803	5.5	(4.0-7.6)	1,221	1.8	(1.2-2.7)
<b>Employment Status</b>									
Employed for Wages	3,228	2.2	(1.7-2.8)	1,221	3.3	(2.4-4.5)	2,007	1.1	(0.7-1.7)
Self-employed	909	4.3	(3.1-6.1)	596	5.8	(4.1-8.2)	313	0.5	(0.2-1.4)
Unemployed	179	1.7	(0.7-4.1)	*	*	*	*	*	*
Homemaker	402	2.6	(1.3-5.0)	*	*	*	*	*	*
Retired	1,542	16.3	(14.2-18.6)	551	22.3	(18.6-26.6)	991	11.4	(9.5-13.8)
Unable to Work	266	17.7	(12.9-23.9)	*	*	*	*	*	*

Table 74 (continued) Respondents Who Previously Had a Heart Attack, 2006									
		Total			Male			Fema	le
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
Marital Status									
Married/Unmarried Couple	3,949	4.7	(4.1-5.5)	1,692	7.5	(6.3-8.9)	2,257	1.9	(1.4-2.6)
Divorced/Separated	871	6.3	(4.5-8.6)	340	9.8	(6.6-14.4)	531	3.4	(2.1-5.7)
Widowed	1,023	15.3	(13.0-18.0)	154	25.2	(18.2-33.9)	869	13.3	(11.0-16.0)
Never Married	758	1.3	(0.8-2.1)	394	1.6	(0.9-2.9)	364	0.8	(0.3-2.1)

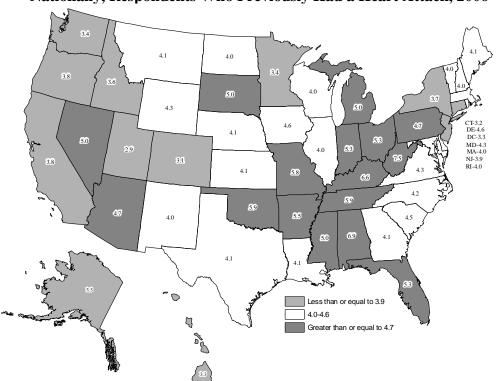
Note: \*Results based on sample sizes less than 100 have been suppressed.

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2006

# **National Statistics**

The national median for respondents who previously had a heart attack was 4.1 percent. South Dakota had 5.0 percent of respondents who have previously had a heart attack. Utah had the lowest percent of respondents who previously had a heart attack with 2.9 percent, while West Virginia had the highest percent with 7.5 percent.

Figure 60 Nationally, Respondents Who Previously Had a Heart Attack, 2006



 $Source: The\ Behavioral\ Risk\ Factor\ Surveillance\ System,\ South\ Dakota\ Department\ of\ Health,\ 2006$ 

# **Further Analysis**

Following are data illustrating the percent of those who previously had a heart attack for various health behaviors and conditions. For example, 18.6 percent of respondents who stated they have fair or poor health status had a heart attack, while 3.2 percent of respondents who stated they have excellent, very good, or good health status had a heart attack.

Table 75 Previously Had a Heart Attack for Selected Health Behaviors and Conditions, 2006						
Health Behavior or Condition	# Respondents	% Had Heart Attack	95% CI			
Obese (BMI = $30.0+$ )	1,675	6.4	5.3-7.8			
Overweight (BMI = $25.0-29.9$ )	2,426	5.4	4.5-6.5			
Recommended Weight (BMI = 18.5-24.9)	2,089	3.6	2.9-4.5			
No Leisure Time Physical Activity	1,736	7.3	6.0-8.7			
Leisure Time Physical Activity	4,882	4.3	3.8-5.0			
Not Heard of "Healthy South Dakota" Program	3,881	4.5	3.9-5.2			
Heard of "Healthy South Dakota" Program	2,412	5.6	4.6-6.7			
Current Smoker	1,247	5.2	4.1-6.7			
Former Smoker	1,816	9.1	7.7-10.7			
Never Smoked	3,546	3.1	2.5-3.7			
Smokeless Tobacco Use	301	4.1	2.1-7.9			
No Smokeless Tobacco Use	6,108	4.9	4.4-5.5			
Diabetes	594	18.6	15.2-22.6			
No Diabetes	6,028	4.1	3.6-4.6			
Current Asthma	489	7.0	4.9-9.9			
Former Asthma	171	2.8	1.4-5.6			
Never Had Asthma	5,930	4.8	4.3-5.5			
No Mammogram within Past Two Years (40+)	775	4.3	3.0-6.1			
Mammogram within Past Two Years (40+)	2,257	5.4	4.5-6.4			
No Clinical Breast Exam within Past Two Years	858	4.8	3.6-6.3			
Clinical Breast Exam within Past Two Years	3,080	2.9	2.4-3.5			
No Pap Smear within the Past Three Years	507 2,380	5.4 1.5	3.7-8.0 1.2-2.1			
Pap Smear within the Past Three Years	, , , , , , , , , , , , , , , , , , ,					
No PSA Test within the Past Two Years (40+)	795	7.6	5.7-9.9			
PSA Test within the Past Two Years (40+)	1,057	14.1	11.9-16.7			
No Digital Rectal Exam within the Past Two Years (40+)	845	8.5 13.1	6.6-10.9			
Digital Rectal Exam within the Past Two Years (40+)	1,072		11.0-15.5			
Prostate Cancer (40+)	101	25.5	16.9-36.6			
No Prostate Cancer (40+)	1,835	10.3	8.9-12.0			
No Blood Stool Test within the Past Two Years (50+)	2,800	9.1	7.9-10.4			
Blood Stool Test within the Past Two Years (50+)	862	15.4	12.7-18.6			
Never Had a Sigmoidoscopy or Colonoscopy (50+)	1,640	8.6	7.0-10.4			
Ever Had a Sigmoidoscopy or Colonoscopy (50+)	2,064	12.3	10.7-14.0			
Diagnosed with Cancer in the Past 12 Months	155	16.0	10.2-24.1			
Not Diagnosed with Cancer in the Past 12 Months	6,212	4.6	4.1-5.2			
Drank Alcohol in Past 30 Days	3,379	3.5	2.9-4.2			
No Alcohol in Past 30 Days	3,219	7.0	6.1-8.1			
Binge Drinker	866	1.3	0.7-2.4			
Not a Binge Drinker	5,578	5.9	5.3-6.6			
Heavy Drinker	206	2.8	1.3-6.1			
Not a Heavy Drinker	6,231	5.2	4.7-5.9			
No Health Insurance (18-64)	404	1.8	0.9-3.7			
Health Insurance (18-64)	4,030	2.5	2.0-3.1			
Employer Based Health Insurance Coverage (18-64)	2,713	1.8	1.4-2.4			
Private Health Insurance Plan (18-64)	570	2.1	1.1-4.0			
Medicare (18-64)	124	18.2	11.0-28.8			
Medicaid or Medical Assistance (18-64)	169	1.8	0.8-3.7			
The Military, CHAMPUS, TriCare, or the VA (18-64)	174	7.7	4.3-13.5			
The Indian Health Service (18-64)	225	3.5	1.9-6.4			
No Flu Shot (65+)	520	15.0	11.7-19.1			
Flu Shot (65+)	1,417	16.5	14.3-18.9			

Table 75 (continued) Previously Had a Heart Attack for Selected Health Behaviors and Conditions, 2006						
Health Behavior or Condition	# Respondents	% Had Heart Attack	95% CI			
No Pneumonia Shot (65+)	645	12.1	9.3-15.6			
Pneumonia Shot (65+)	1,232	18.3	15.9-21.0			
Haven't Been to the Dentist in the Past Year	2,119	6.1	5.1-7.3			
Been to the Dentist in the Past Year	4,481	4.6	4.0-5.3			
Not Taking any Precautions Against West Nile Virus	2,737	5.3	4.5-6.3			
Taking Precautions Against West Nile Virus	3,629	4.5	3.9-5.3			
Sometimes/Seldom/Never Wear Seat Belt	1,148	5.2	4.1-6.6			
Always/Almost Always Wear Seat Belt	5,364	4.9	4.3-5.6			
Have Angina or Coronary Heart Disease	381	53.0	47.1-58.9			
Do Not have Angina or Coronary Heart Disease	6,192	2.6	2.2-3.0			
Previously Had a Stroke	244	29.1	22.7-36.6			
Never Had a Stroke	6,374	4.4	3.9-5.0			
Fair or Poor Health Status	989	18.6	15.9-21.6			
Excellent, Very Good, or Good Health Status	5,612	3.2	2.8-3.8			
Physical Health Not Good for 30 Days of the Past 30	424	14.4	11.0-18.6			
Physical Health Not Good for 0-29 Days of the Past 30	6,079	4.4	3.9-4.9			
Mental Health Not Good for 20-30 Days of the Past 30	349	9.4	6.3-13.6			
Mental Health Not Good for 0-19 Days of the Past 30	6,181	4.7	4.2-5.3			
Usual Activities Unattainable for 10-30 Days of the Past 30	445	14.2	10.7-18.6			
Usual Activities Unattainable for 0-9 Days of the Past 30	6,116	4.3	3.8-4.9			
Dissatisfied / Very Dissatisfied with Life	233	9.7	6.4-14.4			
Satisfied / Very Satisfied with Life	6,185	4.7	4.2-5.3			
Physical, Mental, or Emotional Disability	1,513	12.7	10.9-14.8			
No Physical, Mental, or Emotional Disability	5,091	3.2	2.7-3.7			
Disability with Special Equipment Needed	528	17.1	13.6-21.3			
No Disability with Special Equipment Needed	6,093	4.3	3.8-4.8			
Injured in a Fall (45+)	234	16.5	11.5-23.3			
Not Injured in a Fall (45+)	4,254	8.7	7.8-9.8			
Never Been Tested for HIV (18-64)	3,541	2.2	1.8-2.8			
Been Tested for HIV (18-64)	900	3.0	2.0-4.6			
Military Veteran	998	12.6	10.4-15.1			
Not a Military Veteran	5,611	3.7	3.2-4.2			

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2006

#### ANGINA OR CORONARY HEART DISEASE

Definition: Respondents who answered "yes" to the question "Has a doctor, nurse, or other health professional ever told you that you have angina or coronary heart disease?"

# Prevalence of angina or coronary heart disease

- South Dakota 4.3%
- o Nationwide median 4.5%

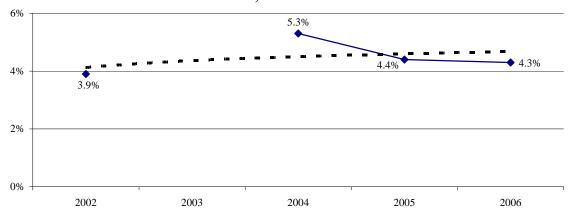
### **Healthy People 2010 Objective**

There was no stated Healthy People 2010 Objective for having angina or coronary heart disease.

# **Trend Analysis**

This question was asked in 2002 and 2004 through 2006. Overall, the percent of respondents who have angina or coronary heart disease has been increasing. However, since 2004 the percent has been decreasing.

Figure 61
Percent of Respondents Who Have Angina or Coronary Heart
Disease, 2002 and 2004-2006



Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2002, and 2004-2006

# **Demographics**

**Gender** Males exhibit a significantly higher prevalence of heart disease than females. This gender difference is evident in specific demographic categories such as those

65 and older, whites, those in the higher income groups, college graduates, and

those who are married.

Age The prevalence of ever having been told they have heart disease increases as age

increases with significant increases occurring at the 45-54 and 65-74 age groups.

**Race** There are no racial differences observed from the available data.

**Region** There are no regional differences observed from the available data.

**Household** The prevalence of ever having been told they have heart disease is higher in the lower household income groups.

**Education** Heart disease prevalence generally decreases as education increases. This association is more evident in females.

**Status** Those who are retired or unable to work demonstrate a very high prevalence of heart disease, while those who are employed for wages, self-employed, unemployed, or a homemaker show a very low prevalence.

Marital Those who are widowed exhibit a very high prevalence of ever having been told they have heart disease, while those who have never been married show a very low prevalence. Also, females who are married demonstrate a very low prevalence, while males who are divorced show a very high prevalence.

Table 76 Respondents Who Have Angina or Coronary Heart Disease, 2006									
Kespoi	luciits vi	Total		Male			Female		
	# Resp.	<u> 10tai</u>	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
Total	6,593	4.3	(3.8-4.9)	2,575	5.4	(4.6-6.3)	4,018	3.3	(2.8-3.9)
Age			,	,		, , , , , ,			, , ,
18-24	263	0.0	-	111	0.0	_	152	0.0	-
25-34	735	0.4	(0.1-1.9)	284	0.6	(0.1-4.1)	451	0.2	(0.0-1.1)
35-44	1,036	0.6	(0.3-1.3)	419	0.7	(0.2-1.7)	617	0.6	(0.2-1.6)
45-54	1,403	3.5	(2.5-4.9)	584	5.4	(3.6-8.0)	819	1.7	(1.0-3.0)
55-64	1,165	5.6	(4.3-7.2)	496	6.7	(4.7-9.5)	669	4.4	(3.0-6.3)
65-74	934	12.1	(9.8-14.9)	360	16.8	(12.7-21.9)	574	8.1	(6.0-10.8)
75+	987	17.0	(14.4-20.1)	298	23.1	(18.0-29.3)	689	13.2	(10.5-16.4)
Race									
White	5,877	4.4	(3.9-5.0)	2,304	5.5	(4.6-6.5)	3,573	3.4	(2.9-4.0)
American Indian	512	4.3	(2.7-6.8)	188	5.5	(2.8-10.3)	324	3.2	(1.9-5.2)
Region									
Southeast	1,478	3.8	(2.9-4.8)	575	4.8	(3.4-6.7)	903	2.8	(2.0-3.9)
Northeast	1,596	4.9	(3.9-6.0)	602	6.3	(4.7-8.5)	994	3.5	(2.7-4.7)
Central	1,345	4.0	(3.1-5.1)	528	4.5	(3.1-6.6)	817	3.4	(2.4-4.8)
West	1,509	4.8	(3.8-6.0)	598	6.0	(4.4-8.0)	911	3.7	(2.7-4.9)
American Indian Counties	665	4.8	(3.4-6.7)	272	4.9	(3.0-7.9)	393	4.6	(2.9-7.3)
Household Income									
Less than \$10,000	306	6.3	(4.1-9.5)	*	*	*	*	*	*
\$10,000-\$14,999	386	10.3	(7.4-14.2)	110	11.2	(6.1-19.8)	276	9.9	(6.7-14.2)
\$15,000-\$19,999	501	5.4	(3.7-7.9)	160	7.1	(4.1-12.1)	341	4.0	(2.5-6.6)
\$20,000-\$24,999	555	3.5	(2.1-5.8)	204	3.3	(1.4-7.5)	351	3.6	(1.9-6.8)
\$25,000-\$34,999	893	5.0	(3.7-6.8)	381	7.4	(5.1-10.7)	512	2.4	(1.4-4.0)
\$35,000-\$49,999	1,132	4.9	(3.6-6.5)	490	6.7	(4.7-9.7)	642	2.9	(1.8-4.6)
\$50,000-\$74,999	1,027	3.3	(2.4-4.6)	480	4.9	(3.4-7.2)	547	1.4	(0.7-2.6)
\$75,000+	916	2.2	(1.4-3.3)	459	3.3	(2.0-5.2)	457	0.7	(0.3-1.9)
<b>Education</b>									
8th Grade or Less	281	9.2	(5.8-14.2)	124	10.3	(5.4-18.9)	157	7.8	(4.3-13.6)
Some High School	335	5.9	(4.0-8.6)	133	6.0	(3.3-10.8)	202	5.8	(3.6-9.3)
High School or G.E.D.	2,119	4.8	(3.9-5.8)	859	5.4	(4.1-7.2)	1,260	4.1	(3.1-5.4)
Some Post-High School	1,826	3.5	(2.8-4.4)	650	4.2	(2.9-5.9)	1,176	3.0	(2.2-4.0)
College Graduate	2,018	3.9	(3.1-4.9)	799	5.7	(4.2-7.7)	1,219	2.1	(1.5-3.0)
Employment Status									
Employed for Wages	3,221	1.8	(1.4-2.3)	1,218	2.3	(1.6-3.3)	2,003	1.2	(0.8-1.7)
Self-employed	906	3.2	(2.2-4.7)	593	3.9	(2.6-5.8)	313	1.6	(0.6-4.1)
Unemployed	179	1.3	(0.4-4.6)	*	*	*	*	*	*
Homemaker	399	2.7	(1.6-4.5)	*	*	*	*	*	*
Retired	1,526	14.9	(12.9-17.3)	546	20.2	(16.4-24.5)	980	10.8	(8.8-13.2)
Unable to Work	264	15.2	(10.8-20.9)	*	*	*	*	*	*

Table 76 (continued) Respondents Who Have Angina or Coronary Heart Disease, 2006									
	Total Male Female								
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
Marital Status									
Married/Unmarried Couple	3,935	4.2	(3.6-5.0)	1,684	6.2	(5.1-7.5)	2,251	2.3	(1.7-3.0)
Divorced/Separated	870	5.7	(4.1-7.8)	339	7.4	(4.7-11.4)	531	4.3	(2.7-6.9)
Widowed	1,006	11.8	(9.7-14.2)	150	13.4	(8.4-20.6)	856	11.5	(9.3-14.1)
Never Married	759	1.0	(0.6-1.6)	394	1.1	(0.6-2.1)	365	0.8	(0.3-1.9)

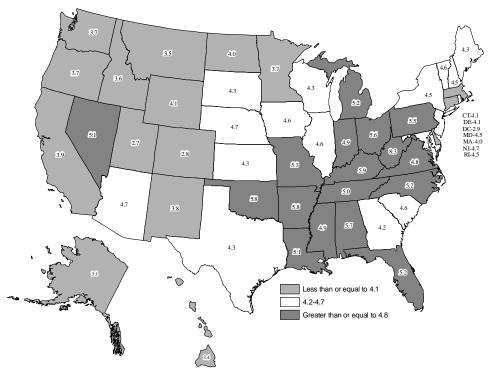
Note: \*Results based on sample sizes less than 100 have been suppressed.

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2006

### **National Statistics**

The national median for respondents who have angina or coronary heart disease was 4.5 percent. South Dakota had 4.3 percent of respondents who have angina or coronary heart disease. Utah had the lowest percent of respondents who have angina or coronary heart disease with 2.7 percent, while West Virginia had the highest percent with 8.3 percent.

Figure 62 Nationally, Respondents Who Have Angina or Coronary Heart Disease, 2006



 $Source: The \ Behavioral \ Risk \ Factor \ Surveillance \ System, South \ Dakota \ Department \ of \ Health, 2006$ 

#### **Further Analysis**

Following are data illustrating the percent of those who were have angina or coronary heart disease for various health behaviors and conditions. For example, 8.1 percent of respondents who stated they were a former smoker have angina or coronary heart disease, while 3.0 percent of respondents who stated they never smoked have angina or coronary heart disease.

Have Angina or Coronary Heart Disease for Sele Health Behavior or Condition	# Respondents	% Heart Disease	95% CI
Obese (BMI = 30.0+)	1,663	5.4	4.4-6.7
Overweight (BMI = 25.0-29.9)	2,416	4.8	3.9-5.8
Recommended Weight (BMI = 18.5-24.9)	2,077	3.4	2.7-4.3
No Leisure Time Physical Activity	1,728	6.0	4.9-7.3
Leisure Time Physical Activity	4,859	3.8	3.3-4.4
Not Heard of "Healthy South Dakota" Program	3,865	4.1	3.5-4.8
Heard of "Healthy South Dakota" Program	2,399	4.9	4.1-6.0
Current Smoker	1,239	3.4	2.5-4.5
Former Smoker	1,809	8.1	6.8-9.5
Never Smoked	3,530	3.0	2.5-3.6
Smokeless Tobacco Use	301	2.8	1.2-6.4
No Smokeless Tobacco Use	6,079	4.4	3.9-5.0
Diabetes	585	13.8	10.9-17.4
No Diabetes	6,006	3.7	3.2-4.2
Current Asthma	487	5.0	3.3-7.5
Former Asthma	172	2.4	1.2-4.9
Never Had Asthma	5,903	4.3	3.8-4.9
No Mammogram within Past Two Years (40+)	771	5.0	3.5-7.0
Mammogram within Past Two Years (40+)	2,246	5.5	4.6-6.5
No Clinical Breast Exam within Past Two Years	860	4.2	3.0-5.8
Clinical Breast Exam within Past Two Years	3,062	3.1	2.6-3.8
No Pap Smear within the Past Three Years	506	3.3	2.0-5.4
Pap Smear within the Past Three Years	2,371	1.8	1.4-2.4
No PSA Test within the Past Two Years (40+)	795	5.1	3.7-7.2
PSA Test within the Past Two Years (40+)	1,046	12.5	10.4-15.0
No Digital Rectal Exam within the Past Two Years (40+)	842	6.2	4.6-8.3
Digital Rectal Exam within the Past Two Years (40+)	1,063	11.4	9.4-13.7
Prostate Cancer (40+)	101	20.5	13.1-30.7
No Prostate Cancer (40+)	1,823	8.4	7.1-10.0
No Blood Stool Test within the Past Two Years (50+)	2,783	8.4	7.3-9.7
Blood Stool Test within the Past Two Years (50+)	859	13.9	11.3-17.0
Never Had a Sigmoidoscopy or Colonoscopy (50+)	1,632	7.8	6.3-9.6
Ever Had a Sigmoidoscopy or Colonoscopy (50+)	2,047	11.1	9.6-12.8
Diagnosed with Cancer in the Past 12 Months	151	12.7	8.0-19.6
Not Diagnosed with Cancer in the Past 12 Months	6,185	4.2	3.7-4.7
Drank Alcohol in Past 30 Days	3,371	3.2	2.6-3.9
No Alcohol in Past 30 Days	3,197	5.8	5.0-6.8
Binge Drinker	864	1.3	0.7-2.4
Not a Binge Drinker	5,548	5.0	4.5-5.7
Heavy Drinker	205	3.5	1.7-6.9
Not a Heavy Drinker	6,200	4.4	3.9-5.0
No Health Insurance (18-64)	401	1.0	0.4-2.7
Health Insurance (18-64)	4,024	2.1	1.7-2.6
Employer Based Health Insurance Coverage (18-64)	2,708	1.5	1.1-2.1
Private Health Insurance Plan (18-64)	569	2.3	1.2-4.2
Medicare (18-64)	125	18.3	10.9-29.1
Medicaid or Medical Assistance (18-64)	167	1.2	0.5-3.0
The Military, CHAMPUS, TriCare, or the VA (18-64)	174	3.2	1.6-6.4
The Indian Health Service (18-64)	225	3.4	1.7-6.4
No Flu Shot (65+)	514	10.3	7.5-14.0
Flu Shot (65+)	1,400	16.3	14.1-18.8

Table 77 (continued) Have Angina or Coronary Heart Disease for Selected Health Behaviors and Conditions, 2006						
Health Behavior or Condition	# Respondents	% Heart Disease	95% CI			
No Pneumonia Shot (65+)	643	10.0	7.4-13.4			
Pneumonia Shot (65+)	1,211	16.8	14.5-19.5			
Haven't Been to the Dentist in the Past Year	2,104	5.4	4.5-6.5			
Been to the Dentist in the Past Year	4,466	3.9	3.3-4.5			
Not Taking any Precautions Against West Nile Virus	2,728	4.4	3.7-5.3			
Taking Precautions Against West Nile Virus	3,609	4.3	3.7-5.1			
Sometimes/Seldom/Never Wear Seat Belt	1,142	3.9	2.9-5.2			
Always/Almost Always Wear Seat Belt	5,340	4.5	3.9-5.1			
Previously Had a Heart Attack	427	48.0	42.3-53.7			
Never Had a Heart Attack	6,146	2.1	1.8-2.5			
Previously Had a Stroke	243	27.4	21.0-34.9			
Never Had a Stroke	6,346	3.8	3.3-4.3			
Fair or Poor Health Status	975	16.7	14.2-19.6			
Excellent, Very Good, or Good Health Status	5,595	2.7	2.3-3.2			
Physical Health Not Good for 30 Days of the Past 30	414	14.4	10.9-18.8			
Physical Health Not Good for 0-29 Days of the Past 30	6,058	3.7	3.2-4.2			
Mental Health Not Good for 20-30 Days of the Past 30	347	4.9	3.2-7.4			
Mental Health Not Good for 0-19 Days of the Past 30	6,153	4.2	3.7-4.7			
Usual Activities Unattainable for 10-30 Days of the Past 30	441	11.2	8.4-14.9			
Usual Activities Unattainable for 0-9 Days of the Past 30	6,093	3.8	3.3-4.4			
Dissatisfied / Very Dissatisfied with Life	229	10.8	7.1-16.0			
Satisfied / Very Satisfied with Life	6,161	4.2	3.7-4.7			
Physical, Mental, or Emotional Disability	1,499	12.0	10.3-14.0			
No Physical, Mental, or Emotional Disability	5,073	2.5	2.1-3.0			
Disability with Special Equipment Needed	520	14.2	11.1-18.0			
No Disability with Special Equipment Needed	6,070	3.7	3.3-4.3			
Injured in a Fall (45+)	230	15.8	10.8-22.4			
Not Injured in a Fall (45+)	4,233	7.7	6.8-8.7			
Never Been Tested for HIV (18-64)	3,539	1.8	1.4-2.2			
Been Tested for HIV (18-64)	894	2.7	1.7-4.2			
Military Veteran	991	9.1	7.3-11.3			
Not a Military Veteran	5,587	3.5	3.0-4.0			

 $Source: \ The \ Behavioral \ Risk \ Factor \ Surveillance \ System, \ South \ Dakota \ Department \ of \ Health, \ 2006$ 

#### PREVIOUSLY HAD A STROKE

Definition: Respondents who answered "yes" to the question "Has a doctor, nurse, or other health professional ever told you that you have previously had a stroke?"

### Prevalence of previously had a stroke

- South Dakota 2.4%
- o Nationwide median 2.6%

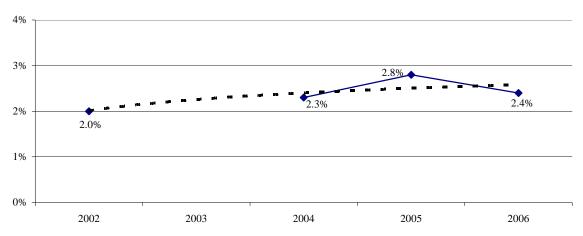
# **Healthy People 2010 Objective**

There was no stated Healthy People 2010 Objective for previously had a stroke.

### **Trend Analysis**

This question was asked in 2002 and 2004 through 2006. The percent of respondents who stated they have previously had a stroke has been increasing since the question was first asked in 2002. However, there was a slight decrease from 2.8 percent in 2005 to 2.4 percent in 2006.

Figure 63
Percent of Respondents Who Have Previously Had a Stroke, 2002 and 2004-2006



Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2002, and 2004-2006

### **Demographics**

Gender There is no gender difference exhibited by the available data for ever having had

a stroke.

**Age** The prevalence of ever having had a stroke generally increases as age increases.

This includes significant increases when the 45-54 and 75 and older age groups

are reached.

**Race** There are no racial differences demonstrated by the available data.

**Region** The are no regional differences observed from the available data.

**Household** The prevalence of ever having had a stroke generally decreases as household

**Income** income increases.

**Education** Stroke prevalence decreases as education increases.

**Employment** Those who are a homemaker, retired, or unable to work demonstrate a very high Status prevalence of ever having had a stroke, while those who are employed for wages,

self-employed, or unemployed show a very low prevalence.

Marital **Status** 

Those who are widowed exhibit a very high prevalence of ever having had a stroke, while those who have never been married show a very low prevalence.

Table 78 Respondents Who Previously Had a Stroke, 2006										
	Total			Male				Female		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI	
Total	6,642	2.4	(2.0-2.8)	2,595	2.0	(1.6-2.6)	4,047	2.8	(2.2-3.4)	
Age			,							
18-24	264	0.6	(0.1-4.1)	112	0.0	_	152	1.2	(0.2-8.1)	
25-34	739	0.2	(0.0-0.7)	285	0.2	(0.0-1.4)	454	0.1	(0.0-0.9)	
35-44	1,037	0.5	(0.3-1.1)	419	0.6	(0.2-1.8)	618	0.5	(0.2-1.0)	
45-54	1,411	2.0	(1.4-2.9)	589	1.5	(0.8-2.7)	822	2.5	(1.6-4.1)	
55-64	1,167	2.7	(1.9-3.9)	499	2.5	(1.3-4.5)	668	3.0	(1.9-4.5)	
65-74	945	4.8	(3.6-6.5)	364	4.4	(2.7-7.1)	581	5.2	(3.6-7.6)	
75+	1.009	10.3	(8.2-12.7)	304	11.4	(8.0-16.1)	705	9.5	(7.2-12.4)	
Race	1,007	10.0	(0.2 12.17)	20.	1111	(0.0 10.1)	700	7.0	(7.2 12.1)	
White	5,919	2.3	(1.9-2.7)	2,322	1.9	(1.4-2.5)	3,597	2.7	(2.1-3.4)	
American Indian	515	4.0	(2.7-6.1)	187	3.1	(1.6-5.8)	328	5.0	(2.9-8.5)	
	313	4.0	(2.7-0.1)	107	3.1	(1.0-3.6)	320	5.0	(2.7-6.3)	
Region Southeast	1,490	2.0	(1.4-2.7)	580	1.1	(0.6-2.2)	910	2.8	(2.0-4.0)	
Northeast	1,613	2.3	(1.4-2.7)	610	2.7	(1.7-4.1)	1,003	2.0	(1.4-2.8)	
Central	1,356	3.0	(2.2-4.0)	532	3.1	(2.0-4.8)	824	2.9	(2.0-4.2)	
West	1,514	2.7		602	2.2		912	3.1		
	669	3.5	(1.8-3.9)			(1.4-3.5)	-		(1.8-5.3)	
American Indian Counties	009	3.3	(2.4-5.2)	271	2.6	(1.4-5.0)	398	4.6	(2.9-7.3)	
Household Income	210		(2.7.7.0)							
Less than \$10,000	310	5.3	(3.5-7.9)	*	*	*	*	*	*	
\$10,000-\$14,999	392	5.3	(3.6-7.9)	112	5.2	(2.5-10.5)	280	5.4	(3.4-8.6)	
\$15,000-\$19,999	507	4.0	(2.5-6.2)	162	3.0	(1.4-6.5)	345	4.8	(2.8-8.1)	
\$20,000-\$24,999	561	3.3	(2.1-5.1)	206	3.3	(1.7-6.3)	355	3.2	(1.7-6.0)	
\$25,000-\$34,999	898	2.6	(1.7-3.8)	385	2.7	(1.5-4.7)	513	2.5	(1.4-4.3)	
\$35,000-\$49,999	1,133	1.3	(0.8-2.1)	491	1.4	(0.7-2.5)	642	1.2	(0.6-2.5)	
\$50,000-\$74,999	1,030	1.5	(0.9-2.5)	482	2.4	(1.4-4.2)	548	0.5	(0.2-1.3)	
\$75,000+	920	0.6	(0.3-1.1)	461	0.4	(0.2-1.1)	459	0.8	(0.3-1.9)	
<b>Education</b>										
8th Grade or Less	286	4.6	(2.5-8.1)	126	4.4	(1.7-11.2)	160	4.7	(2.6-8.3)	
Some High School	342	3.4	(2.0-5.6)	134	2.8	(1.1-7.0)	208	3.9	(2.2-7.0)	
High School or G.E.D.	2,135	3.0	(2.3-4.0)	866	1.9	(1.3-2.9)	1,269	4.1	(2.9-5.9)	
Some Post-High School	1,836	2.2	(1.7-2.9)	654	2.0	(1.3-3.1)	1,182	2.3	(1.6-3.3)	
College Graduate	2,028	1.6	(1.1-2.2)	804	1.6	(1.0-2.8)	1,224	1.5	(0.9-2.4)	
<b>Employment Status</b>										
Employed for Wages	3,232	0.9	(0.6-1.2)	1,224	0.8	(0.5-1.3)	2,008	1.0	(0.6-1.4)	
Self-employed	911	1.9	(1.2-2.9)	597	1.8	(1.1-3.1)	314	1.9	(0.9-4.2)	
Unemployed	181	1.3	(0.5-3.1)	*	*	*	*	*	*	
Homemaker	402	3.5	(1.3-8.8)	*	*	*	*	*	*	
Retired	1,550	7.6	(6.2-9.3)	553	6.8	(4.8-9.5)	997	8.2	(6.4-10.5)	
Unable to Work	268	8.5	(5.3-13.4)	*	*	*	*	*	*	
Marital Status										
Married/Unmarried Couple	3,957	1.9	(1.5-2.5)	1,696	2.1	(1.6-2.8)	2,261	1.8	(1.2-2.6)	
Divorced/Separated	873	4.4	(3.1-6.2)	341	3.4	(2.1-5.4)	532	5.1	(3.2-8.2)	
Widowed	1,027	8.9	(7.1-11.1)	154	8.7	(5.0-14.6)	873	8.9	(7.0-11.3)	
Never Married	762	0.5	(0.3-1.0)	396	0.4	(0.1-1.2)	366	0.7	(0.3-1.5)	

Note: \*Results based on sample sizes less than 100 have been suppressed.

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2006

### **National Statistics**

The national median for respondents who previously had a stroke was 2.6 percent. South Dakota had 2.4 percent of respondents who previously had a stroke. Colorado had the lowest percent of respondents who previously had a stroke with 1.6 percent, while Alabama had the highest percent with 4.7 percent.

Figure 64
Nationally, Respondents Who Previously Had a Stroke, 2006

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2006

# **Further Analysis**

Following are data illustrating the percent of those who previously had a stroke for various health behaviors and conditions. For example, 7.5 percent of respondents who stated they have diabetes previously had a stroke, while 2.0 percent of respondents who stated they do not have diabetes previously had a stroke.

Table 79 Previously Had a Stroke for Selected Health Behaviors and Conditions, 2006							
Health Behavior or Condition	# Respondents	% Had Stroke	95% CI				
Obese $(BMI = 30.0+)$	1,680	2.4	1.7-3.2				
Overweight (BMI = 25.0-29.9)	2,432	2.4	1.9-3.1				
Recommended Weight (BMI = 18.5-24.9)	2,092	2.3	1.7-3.2				
No Leisure Time Physical Activity	1,747	4.0	3.2-5.1				
Leisure Time Physical Activity	4,889	1.9	1.5-2.3				
Not Heard of "Healthy South Dakota" Program	3,895	2.2	1.8-2.7				
Heard of "Healthy South Dakota" Program	2,416	2.6	2.0-3.5				
Current Smoker	1,250	2.6	1.7-3.9				
Former Smoker	1,823	3.4	2.7-4.3				
Never Smoked	3,554	1.9	1.5-2.4				

Table 79 (con Previously Had a Stroke for Selected Hea		nd Conditions, 2	006
Health Behavior or Condition	# Respondents	% Had Stroke	95% CI
Smokeless Tobacco Use	301	1.0	0.4-2.7
No Smokeless Tobacco Use	6,126	2.5	2.1-2.9
Diabetes	596	7.5	5.4-10.1
No Diabetes	6,044	2.0	1.7-2.4
Current Asthma	489	4.9	2.8-8.6
Former Asthma	174	2.3	1.1-5.0
Never Had Asthma	5,946	2.2	1.9-2.6
No Mammogram within Past Two Years (40+)	777	5.1	3.5-7.4
Mammogram within Past Two Years (40+)	2,264	3.8	3.1-4.7
No Clinical Breast Exam within Past Two Years	866	4.2	2.9-6.0
Clinical Breast Exam within Past Two Years	3,084	2.1	1.7-2.7
No Pap Smear within the Past Three Years	510	3.5	2.2-5.4
Pap Smear within the Past Three Years	2,385	1.8	1.2-2.6
No PSA Test within the Past Two Years (40+)	799	2.6	1.7-3.9
PSA Test within the Past Two Years (40+)	1,059	4.0	3.0-5.5
No Digital Rectal Exam within the Past Two Years (40+)	848	2.3	1.5-3.5
Digital Rectal Exam within the Past Two Years (40+)	1,074	4.2	3.1-5.6
Prostate Cancer (40+)	+		
	102	9.0	4.4-17.8
No Prostate Cancer (40+)	1,840	3.1	2.4-4.0
No Blood Stool Test within the Past Two Years (50+)	2,807	5.0	4.2-6.0
Blood Stool Test within the Past Two Years (50+)	867	5.3	3.8-7.2
Never Had a Sigmoidoscopy or Colonoscopy (50+)	1,645	5.3	4.2-6.8
Ever Had a Sigmoidoscopy or Colonoscopy (50+)	2,071	5.0	4.1-6.1
Diagnosed with Cancer in the Past 12 Months	155	7.9	4.0-14.9
Not Diagnosed with Cancer in the Past 12 Months	6,228	2.3	1.9-2.7
Drank Alcohol in Past 30 Days	3,381	1.3	1.0-1.9
No Alcohol in Past 30 Days	3,235	3.8	3.2-4.5
Binge Drinker	866	0.7	0.4-1.3
Not a Binge Drinker	5,594	2.8	2.4-3.3
Heavy Drinker	206	0.6	0.1-3.4
Not a Heavy Drinker	6,247	2.5	2.1-3.0
No Health Insurance (18-64)	404	1.6	0.4-6.3
Health Insurance (18-64)	4,036	1.2	0.9-1.5
Employer Based Health Insurance Coverage (18-64)	2,716	0.7	0.5-1.0
Private Health Insurance Plan (18-64)	570	0.6	0.3-1.5
Medicare (18-64)	126	6.8	3.3-13.5
Medicaid or Medical Assistance (18-64)	167	1.8	0.8-4.1
The Military, CHAMPUS, TriCare, or the VA (18-64)	175	3.8	1.6-9.0
The Indian Health Service (18-64)	226	4.2	2.3-7.7
No Flu Shot (65+)	520	6.8	4.8-9.6
Flu Shot (65+)	1,427	8.0	6.5-9.8
No Pneumonia Shot (65+)	648	5.5	3.8-8.1
Pneumonia Shot (65+)	1,239	8.6	7.0-10.6
Haven't Been to the Dentist in the Past Year	2,128	3.4	2.7-4.3
Been to the Dentist in the Past Year	4,490	1.9	1.6-2.4
Not Taking any Precautions Against West Nile Virus	2,750	2.9	2.3-3.5
Taking Precautions Against West Nile Virus	3,632	2.0	1.5-2.5
Sometimes/Seldom/Never Wear Seat Belt	1,154	2.5	1.8-3.4
Always/Almost Always Wear Seat Belt	5,376	2.4	2.0-2.9
Previously Had a Heart Attack	454	13.8	10.6-17.8
Never Had a Heart Attack	6,164	1.8	1.5-2.2
INCVOLUTAU A LICALI ALIAUK	0,104	1.0	1.3-2.2

Table 79 (continued) Previously Had a Stroke for Selected Health Behaviors and Conditions, 2006							
Health Behavior or Condition	# Respondents	% Had Stroke	95% CI				
Have Angina or Coronary Heart Disease	388	15.0	11.4-19.6				
Do Not have Angina or Coronary Heart Disease	6,201	1.8	1.5-2.2				
Fair or Poor Health Status	996	10.1	7.9-12.8				
Excellent, Very Good, or Good Health Status	5,623	1.4	1.1-1.7				
Physical Health Not Good for 30 Days of the Past 30	426	8.8	6.3-12.2				
Physical Health Not Good for 0-29 Days of the Past 30	6,094	2.0	1.7-2.4				
Mental Health Not Good for 20-30 Days of the Past 30	353	5.8	2.8-11.7				
Mental Health Not Good for 0-19 Days of the Past 30	6,193	2.2	1.9-2.6				
Usual Activities Unattainable for 10-30 Days of the Past 30	450	6.7	4.6-9.6				
Usual Activities Unattainable for 0-9 Days of the Past 30	6,129	2.1	1.7-2.5				
Dissatisfied / Very Dissatisfied with Life	235	5.0	3.0-8.2				
Satisfied / Very Satisfied with Life	6,200	2.3	2.0-2.8				
Physical, Mental, or Emotional Disability	1,520	6.5	5.2-8.2				
No Physical, Mental, or Emotional Disability	5,101	1.4	1.1-1.7				
Disability with Special Equipment Needed	533	12.4	9.5-16.0				
No Disability with Special Equipment Needed	6,106	1.8	1.5-2.2				
Injured in a Fall (45+)	233	10.7	6.8-16.6				
Not Injured in a Fall (45+)	4,272	3.9	3.3-4.6				
Never Been Tested for HIV (18-64)	3,549	1.1	0.8-1.6				
Been Tested for HIV (18-64)	899	1.4	0.9-2.3				
Military Veteran	1,002	3.2	2.2-4.5				
Not a Military Veteran	5,625	2.3	1.9-2.7				

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2006